

Montana Department of Natural Resources and Conservation Forested State Trust Lands Habitat Conservation Plan Annual Update

Reporting Period

January 1,
2014-
December 31,
2014



INTRODUCTION

The Montana Department of Natural Resources and Conservation (DNRC) Forested State Trust Lands Habitat Conservation Plan (HCP) is a plan DNRC developed in order for the United States Fish & Wildlife Service (USFWS) to issue an Incidental Take Permit (Permit) for a 50-year term. In the HCP, DNRC committed to provide the USFWS annual updates and 5-year monitoring reports for the duration of the plan. The updates and monitoring reports serve to help the two agencies assess the success of HCP implementation and the effectiveness of conservation commitments. This is the third annual update, and the reporting period for this update is January 1, 2014-December 31, 2014. According to the results reported in the following sections, DNRC has fulfilled its annual commitments for monitoring and reporting according to HCP Chapter 4 – Monitoring and Adaptive Management (DNRC 2010).

As outlined in Chapter 8- HCP Implementation, DNRC and the USFWS are required to meet annually. These meetings allow DNRC to present the USFWS with annual updates and provide an information sharing opportunity that fosters communication between the two agencies (DNRC 2010).

MONITORING AND ADAPTIVE MANAGEMENT

During development of the conservation strategies, DNRC and the USFWS included commitments to monitor key components of HCP conservation strategies. The monitoring and adaptive management program provides assurances that the HCP is being appropriately and effectively implemented, and outlines a course of action if the conservation strategies are not yielding the desired results.

Monitoring

There are two types of monitoring: (1) implementation monitoring and (2) effectiveness monitoring. Implementation monitoring ensures implementation of DNRC's conservation commitments throughout the Permit term. Implementation monitoring represents DNRC's largest monitoring commitment associated with the HCP and involves tracking, reporting and evaluating whether the covered activities are being performed in compliance with the HCP requirements. Implementation is primarily documented through project-level HCP checklists and validated through office and field reviews (DNRC 2010).

Effectiveness monitoring typically involves evaluation of a particular conservation commitment or suite of commitments designed to have a desired effect on a target species or resource. This type of monitoring is intensive and requires considerable resources and expertise to conduct data collection and perform related analyses. Effectiveness monitoring for the HCP is fulfilled through a commitment by both DNRC and the USFWS to consider any new relevant research at annual meetings, and through DNRC's commitment to conduct monitoring to evaluate whether management prescriptions and conservation commitments are having the desired effect on the given species.

The monitoring tables in this update summarize both the implementation and effectiveness monitoring that took place during this reporting period. The tables contain information that must be reported annually as described in tables in the HCP Chapter 4 (DNRC 2010). The tables contain abbreviated descriptions of the HCP commitments that DNRC is required to report on annually. For full descriptions of those commitments, please see Chapter 2 of the HCP.

Adaptive Management

Adaptive management is a process whereby conservation commitments and management actions may be changed based on the results obtained from effectiveness monitoring and/or research. This process

results in a feedback loop that incorporates better understanding into everyday practices. This update serves as a component of the adaptive management process.

HCP CHECKLIST

To comply with HCP commitments, tools and protocols were developed. Many of the accomplishments listed in this update reflect the development and implementation of these tools and protocols. As time progresses, refinements will occur as new and improved methods are discovered.

HCP implementation checklists are the primary means by which the DNRC documents compliance with HCP commitments. These macro-enabled spreadsheets contain the HCP commitments specific to each field unit. The spreadsheets allow field practitioners to verify whether or not the commitments are being implemented, and they serve as prompts to ensure that all applicable commitments are considered and applied on each project. The checklists provide the opportunity for many of the HCP commitments to be tracked in one place. At the end of the reporting period the checklists can be compiled into a database that provides information required in the annual updates and 5 year reports. Much of the information in the following tables was compiled using the checklists and the associated database.

There were 30 HCP checklists completed during this reporting period. Twenty-eight of those involved timber harvests (includes salvage) and two were associated with pre-commercial thinning.

GRIZZLY BEAR

DNRC manages state trust lands located within grizzly bear habitat. The following table outlines the reporting requirements and results for grizzly bears.

Table 1 Grizzly bear reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
GB-PR1(2) Information Education (initially & 5 year) – Providing bear avoidance training for employees	Submit training content and methods to the USFWS	Approved bear training DVD and employee tracking process in place July 30, 2013. All staff that normally, or occasionally, performs duties associated with HCP-covered activities must view this training video and register. In 2014, 10 additional new employees viewed the training video. To date over 133 employees have taken the video training.	v.2. 4-10
GB-PR4 Constructed open roads in RMZs, WMZs or avalanche chutes.	HCP Checklist was reviewed on each project. All projects with such construction, and the	From HCP implementation checklist Number of projects that were reviewed = 30	v.2.4-11

Table 1 Grizzly bear reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
(allowances reported annually)	circumstances, would be reported.	Number of projects had open road construction in one or more of these areas = 0.	
GB-RZ6 Granting of Easements – Discourage granting of easements that relinquish DNRC control on roads within grizzly bear recovery zone. (annual and 5 year)	Use HCP Implementation Checklist to Identify Circumstances and Mitigation Associated With the Easement. Annually compile the number of easements granted and associated miles of newly created open roads.	There was one access agreement reported within grizzly bear recovery zones for 2014. This involved an easement near Lincoln and granted access to a private entity for historical uses in section 6, T14N R8W.	v.2.4-15
GB-ST1 Bear presence signs. (year 2)	Number and locations included in accomplishment report for Stillwater Unit.	Three of 4 signs on the Stillwater Main Block were put up Last spring along with food storage signs (Upper Whitefish Road, USFS 900 road, North End Upper Whitefish Road). One was not put up because we were building new Kiosk (Lower Whitefish Road). Kiosk was completed late last fall, and sign will be placed in spring. One of the signs was damaged (gunshots) near Upper Whitefish Lake. Due to active logging the Coal Creek signs (2) have not been put up as we needed to brush the roads first. Should be able to place those this spring.	v.2.4-16
GB-SW1 Bear presence signs. (year 2)	Number and locations included in accomplishment report for Swan Unit.	Swan Unit has 11 mapped sign locations that were reported to the USFWS in 2012. Nine large signs have been placed on the forest. Of these 7 were stolen last year and most were shot numerous times before they were removed. One was stolen directly in front of the office building. Small laminated food storage signs were placed in all campground locations and entry	v.2.4-19

Table 1 Grizzly bear reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
		points into the forest and these will be freshened up again in spring. We will be working on addressing the theft and vandalism issue this year and may need to remove the bear photos from the signs we currently have been using.	
GB-SC1 Maintain or decrease baseline open road amounts at the administrative unit level. Improve GIS road layer. (annually as needed)	Report open road amounts (tracked with GIS) at the administrative unit level to compare with HCP baseline. GIS data quality and management reported at annual meeting.	Little change is present compared to 2014 results (Attachment G-1). Some increases in open roads occurred on other units in each of the land class types reported in Attachment G-1. DNRC will explore implementing new tracking procedures for edits made to open roads in 2015 to better explain observed changes. There were six open road reduction checklist forms filled out in 2014. There was an overall net reduction of 4.5 miles of open roads documented using these procedures in 2014 – primarily on Kalispell Unit.	v.2.4-22
GB-SC4	Report Pits Operated >0.25 Miles From Open Roads in Resting Parcels and Mitigations Applied.	There were 0 projects with pits operated >.25 miles from open roads in resting parcels.	

CANADA LYNX

Some forested trust lands managed by DNRC occur within the distribution of Canada lynx, which was listed as threatened in 2000 by the USFWS. The following table outlines the reporting requirements and results for Canada lynx.

Table 2 Canada lynx reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
LY-HB1 Lynx Habitat Map – Track lynx habitat in the HCP project area. (annual)	Provide lynx habitat map depicting annual changes and table that includes lynx habitat amounts by type for each administrative unit and LMA.	Results are provided for year 2014 in Habitat tables found in Attachment L-1 and L-2. Total potential habitat overall, increased by approximately 2,400 acres in conjunction with various updates and corrections (Attachment L-2).	v.2.4-29
LY-HB6 Maintain 65/35% ratio of suitable/non-suitable habitat on scattered parcels outside of LMAs. (year 2 and 5)	Report acres and percentage of total potential lynx habitat, suitable lynx habitat and temporary non-suitable habitat on scattered parcels outside the LMAs for each land office	CLO = 27,185 ac; 67% suitable NWLO = 56,757 ac; 87% suitable SWLO = 19,770 ac; 80% suitable See lynx habitat table Attachment L-2 for 2015.	v.2.4-32
LY-LM1 Maintain 65/35% ratio of habitat suitability in LMAs. (year 2 and 5)	Report acres and percentage of total potential lynx habitat, suitable lynx habitat and temporary non-suitable habitat on HCP project area parcels within each LMA.	All in compliance except Seeley Lake LMA at 62% due to Jocko Lakes Fire (2007). ¹ See lynx habitat table Attachment L-1 for 2015.	v.2.4-33
LY-LM3 Maintain 20% of total habitat as winter foraging habitat. (year 2 and 5)	Report acres of total potential habitat and current percentage and acres of winter foraging habitat on HCP project area parcels within each LMA.	All in compliance See lynx habitat table Attachment L-1 for 2015.	v.2.4-34

¹When the ITP was issued in February 2012 the Seeley LMA was at less than 65% suitable habitat as a result of the 2007 Jocko Lakes Fire. DNRC has implemented measures to not further reduce suitable lynx habitat below the existing level of 62% in this LMA.

AQUATICS

The aquatic conservation strategies were developed by DNRC with the technical assistance of the USFWS. The process was initiated by identifying a specific biological goal applicable to the three HCP fish species. The identified biological goal was to protect bull trout, westslope cutthroat trout and Columbia redband trout populations and their habitat and to contribute to habitat restoration or rehabilitation, as appropriate, which may have been affected by past DNRC forest management activities. Commitments were developed to address known scientific information and uncertainties in scientific knowledge, as well as existing data gaps (DNRC 2010). The following table outlines the reporting requirements and results for the Aquatics Conservation Strategy.

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
AQ-RM (1) Riparian Management Zone Commitments. (annual)	Complete HCP Implementation checklist review on all sites.	During 2014, RMZs were delineated on 18 projects containing class 1 streams or lakes. 16 of these projects include harvest plans for a total of approximately 84 acres of RMZ harvest.	v. 2.4-39
AQ-RM (2) Thresholds for RMZ harvest allowances. (annual and 5 year)	Acres of Class 1 RMZ, Acres of Class 1 RMZ harvest under allowances, and RMZ area in non-stocked or seed/sapling size class, by aquatic analysis unit (AAU).	One RMZ harvest allowances was utilized during timber sales prepared in 2014 totaling 12 acres within the Stillwater AAU. The only AAUs currently above the 20 % thresholds for non-stocked and/or seedling/sapling size class are the Bitterroot (33%) and North Fork Flathead (22%) AAU. These areas are above threshold levels due to the effects of the 2000 and 2001 wildfire events.	v. 2.4-39
AQ-SD Implement sediment delivery reduction commitments. (annual)	Amount of new road constructed, reconstructed, relocated, abandoned and reclaimed. Include maps (may be contract maps first few years until GIS is available).	Road activities included in timber sale contracts sold from January –December 2014 include: 23.0 miles of permanent road construction 9.3 miles of temporary road construction 1.9 miles of road reclamation 1.0 miles of road abandonment 11.3 miles of road reconstruction 204.6 miles Best Management Practices (BMP) maintenance (See Attachment A-1 – Road Activities Included in DNRC Timber Sale Contracts Sold in 2012, 2013, and 2014). A list of individual road activities included in DNRC timber sales contracts sold during 2014 and individual timber sale contract maps are available upon request.	v.2.4-40
AQ-FC 1/6 of sites in need of corrective actions implemented,	Maintain planning schedule and report accomplishments.	At the start of 2014 there were 83 identified stream crossing sites in need of corrective actions. During 2014, 4 sites were removed from the planning schedule. (Fisheries surveys determined	v.2.4-41

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
<p>planned or designed every 5 years. All priority 1 sites completed within 15 years. All sites completed with 30 years. (annual and 5 year)</p>		<p>that 2 of these sites did not support HCP fish species, and 2 of the sites were found to not be HCP-covered stream crossings.) One stream crossing site in need of corrective actions was added to the planning schedule. No corrective actions on HCP-covered sites were completed during the monitoring year. Currently there are 80 sites remaining from the original 106 sites identified in the original HCP baseline as in need of corrective actions. The HCP 5- year target requires DNRC to address 1/6 of the initial baseline sites in need of corrective actions (18 total sites) by 2017. DNRC has already achieved the 5 year goal following 3 years of HCP implementation. In addition, there is only a single Priority 1 site that remains in need of corrective actions.</p>	
<p>AQ-GZ – Implement grazing conservation strategies for grazing licenses on classified forest lands.(annual)</p>	<p>Update status of grazing evaluations and verifications completed, and corrective action implemented.</p>	<p>During 2014, grazing evaluations were completed on 30 different grazing license located on 56 different trust land parcels. 34 of these parcels are included in the HCP project area, and 13 of these parcels include a stream supporting an HCP covered fish species. These initial evaluations indicated that 3 of the parcels may have adverse impacts to riparian vegetation and require follow-up verifications. None of these parcels support an HCP fish species. To date 7 corrective actions have been implemented within the HCP project area on parcels supporting a HCP fish species.</p>	<p>v.2.4-41</p>
<p>AQ-Cumulative Watershed Effects (CWE) Has DNRC implemented the CWE</p>	<p>Report number, type and location of CWE analysis completed. Provide documentation of mitigation measures or alternatives developed for</p>	<p>HCP checklists were completed for 2 Forest Management projects that did not meet the HCP criteria for requiring CWE analysis. CWE analyses were completed for 28 forest management projects during 2014. For 8 of these</p>	<p>v.2.4-41</p>

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
commitments? (annual and 5 year)	projects with moderate or high CWE risks.	projects a Level 1 CWE analysis (coarse filter) was determined to be sufficient level of analysis due to determination of low risks. More detailed analysis (Level 2 and level 3) were completed on the other 28 projects where the CWE Coarse filter analysis determined that there was potential for moderate to high levels of risk.	
Assess the potential Large Woody Debris (LWD) recruitment and determine whether in-stream LWD targets will be met on five or more riparian harvest sites. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	DNRC has initiated pre-harvest LWD, shade and stream temperature monitoring on 7 sites where RMZ harvest will be implemented under the HCP. DNRC has completed both pre-harvest and post-harvest LWD, shade and stream temperature monitoring at 3 sites harvest under SMZ law. In addition, monitoring has been completed for 3 sites harvest with SMZ/HCP hybrid prescriptions. A brief description of each individual RMZ/SMZ Harvest monitoring project is available upon request.	v.2.4-42
Evaluate levels of in-stream shade retained after riparian harvest. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	See information above.	v.2.4-42
Monitor stream temperatures to evaluate if levels of in-stream cover are adequate to maintain stream temperatures. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	See information above.	v.2.4-42
BMP Audits on all applicable projects. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	Internal BMP audits were conducted on 9 timber sale projects during 2014. Results of the internal audits found that BMPs were properly applied on 98% of	v.2.4-43

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
		<p>the practices rated. BMPs were effective in protecting soil and water on 99% of the practices rated. All departures were considered minor.</p> <p>Statewide, interagency BMP audits were conducted on 6 DNRC timber sale projects during 2014. Similarly, results of the statewide audits on DNRC projects found that BMPs were properly applied on 98% of the practices rated. BMPs were also effective in protecting soil and water on 99% of the practices rated. All departures were considered minor.</p>	
Timber sale inspections on all applicable projects. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	During 2014, 419 timber sale inspections were completed on 47 ongoing timber sale projects within HCP project area. Examples of inspection reports are available upon request.	v.2.4-43
Ongoing quantitative studies at two sites. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	During 2014, DNRC completed 1 instream turbidity project design to document the downstream spatial extent of sediment delivery pulses associated with a bridge replacement project within the Bear Creek watershed (SWLO/Missoula unit). DNRC continued 1 in-stream turbidity monitoring project in Harris Creek watershed (NWLO/Libby unit), that is designed to evaluate the effectiveness of RMZ buffers in preventing sediment delivery to streams. Two years of pre-harvest baseline data has been collected at this site to date. The proposed action was 90% implemented in 2014 leaving only site preparation activities for the spring of 2015. DNRC plans to continue monitoring this site through 2015.	v.2.4-43
Case studies monitoring the effectiveness of	Annual update will consist of a summary of the status of all monitoring activities.	Case studies have not been initiated to date. Initial focus is on identifying sites in need of corrective actions (road	v.2.4-43

Table 3 Aquatics reporting requirements and results

HCP COMMITMENT (Reporting Frequency)	REPORTING REQUIREMENTS	ACCOMPLISHMENTS & RESULTS	HCP Page(s)
corrective actions in reducing sediment from existing sources. (annual and 5 year)		inventory), setting priorities for corrective actions and implementing corrective actions.	
Determine if fish connectivity corrective actions are effective. (annual and 5 year)	Annual update will consist of a summary of the status of all monitoring activities.	<p>During 2014, effectiveness monitoring was completed on 2 of the 15 sites where corrective actions have been implemented. Both of these sites were determined to be successfully emulating stream channel form and function following corrective actions.</p> <p>Supplemental corrective actions were also performed during 2014 to improve stream channel form and function at a separate site found (during effectiveness monitoring in 2013) to not be meeting all criteria in the conservation strategy.</p>	v.2.4-43
AQ-GR1 Redd Trampling Pilot Study. (Develop and finalize plan by year 2, implement plan by year 3)	Complete a plan for Redd trampling pilot study by year 2.	DNRC has initiated an assessment of existing redd trampling risk across all project area lands with grazing licenses. This approach was discussed at the 2014 annual monitoring meeting as an alternative approach to the 'Redd Trampling Pilot Study', and it is expected to address potential problem sites more quickly than the original Pilot Study concept. The risk assessment will also address all project area lands rather than site-specific study reaches. During 2014, redd trampling risk ratings were developed for 97 of 153 project area parcels supporting one or more HCP- covered fish species. Streams within 28 parcels were determined to be at high risk of redd trampling, and mitigation measures are currently being developed. DNRC is in the process of finalizing details of this alternative monitoring strategy.	v.2.8-9

TRANSITION LANDS STRATEGY

The purpose of the transition lands strategy is to describe the process for moving DNRC lands into or out of the HCP project area. The strategy ensures adequate levels of conservation for HCP species while allowing DNRC to meet its land management and fiduciary trust obligations. This subsection summarizes land transactions within two cap types (5% and 10%) from the period between January 1, 2014 and December 31, 2014. According to the HCP, DNRC will cap the removal of HCP project area lands in the NCDE and CYE grizzly bear recovery zones, CYE NROH, LMAs, and bull trout core habitat areas to 5% of the baseline of the original HCP project area. Additionally, DNRC would cap the removal of all other HCP lands at 10 to 15% of the original HCP project area. Since acres obtained through the Montana Working Forests Project have not yet been added to the HCP project area, the 10% cap applies.

Land Dispositions

There was one section of HCP lands disposed of on Bozeman Unit in 2014 that would apply to the 5% cap. This was section T03S R07E S06 and comprised 638.5 acres. This parcel was sold to a private entity. Cumulative percentages for the first three years of implementation by 10% and 5% caps are depicted below. DNRC is still well within the cap described above for all other HCP lands outside of listed species habitats.

TRANSITION LANDS 10% CAP				
Year	*Baseline Acres	Acres Removed	Acres Added	Cumulative Percent Removed
2012	321,229	920	0	0.29%
2013	321,229	0	0	0.29%
2014	321,229	0	0	0.29%

*Baseline acreage corrections as noted in the first 2012 HCP annual report.

TRANSITION LANDS 5% CAP				
Year	*Baseline Acres	Acres Removed	Acres Added	Cumulative Percent
2012	227,271	0	0	0
2013	227,271	0	0	0
2014	227,271	639	0	0.28%

*Baseline acreage corrections as noted in the first 2012 HCP annual report.

TRAINING

Training DNRC staff responsible for implementing the HCP timber sale planning, design and administration is critical to ensure correct and consistent implementation of HCP commitments.

Implementation Training for this Reporting Period

The following training took place during the reporting period, and will continue as the HCP progresses forward.

Bear Avoidance Training

A web-based approach to satisfy GB-PR1 was approved by the USFWS and in place July 30, 2013. All staff that normally, or occasionally, perform duties associated with HCP-covered activities viewed the training video hosted on the DNRC employee intranet. Over 133 employees have viewed the video and registered to date. Ten new employees to DNRC viewed the training material in 2014. A database is monitored by FMB staff to ensure compliance with GB-PR1 “employees trained on bear avoidance”.

Project-level Training

Project-level training occurs on a regular basis. Forest Management Bureau and Land Office Specialists participate on all Interdisciplinary Teams (ID) for projects in the HCP planning area. These Specialists are very familiar with the HCP and the conservation commitments. Many of them have served on the HCP Workgroup. This has made project-level training one of the most effective training tools for DNRC field staff. Questions arise on a project that might never surface in a classroom training session. Project-level training is ongoing and will continue to be a primary training method.

CHANGED CIRCUMSTANCES

The processes for responding to Changed Circumstances are described in Chapter 6 of the HCP. The USFWS and DNRC are required to ensure changed circumstances are identified and planned for in the HCP. Changed Circumstances may be a result of administrative changes, natural events or a natural disturbance. (DNRC 2010)

There were no Changed Circumstances during this reporting period.

ADJUSTING FOR NEW RESEARCH

DNRC and USFWS are required to exchange any new relevant research or emerging science annually and at the 5-year review. Both parties cooperatively determine if the new information will warrant changes to commitments or management actions.

DNRC notes a recent Master’s thesis from the University of Montana (Ruby, 2014) as new science that presents relevant information regarding Grizzly bear movements in the Swan and Clearwater valleys of Montana.

SUMMARY

The DNRC has successfully met the requirements for third year implementation and monitoring.

REFERENCES

- DNRC. 2010. Montana Department of Natural Resources and Conservation Forested State Trust Lands Habitat Conservation Plan: Final EIS, Volume II, Forest Management Bureau, Missoula, Montana.
- Ruby, M.D. 2014. Evaluation of Grizzly bear (*Ursus Arctos*) movement and habitat use in relationship to human development in the Swan-Clearwater valleys, Montana. Master's thesis. University of Montana, Missoula.

ATTACHMENTS

- Attachment A-1: Road Activities Included in DNRC Timber Sale Contracts Sold in 2012, 2013, and 2014
- Attachment G-1: Linear miles of open, restricted, and seasonally restricted road classes by DNRC land office and administrative unit.
- Attachment L-1: Composition of current (2/3/2014) lynx habitat, using the HCP lynx habitat definitions, on LMAs in the HCP project area.
- Attachment L-2: Acres of existing lynx habitat on Non-LMA parcels, using HCP lynx habitat definitions, on DNRC lands by Land Office in the HCP Project Area.

ATTACHMENT A-1

2014 HCP ANNUAL REPORT - DNRC LANDS IN THE HCP PROJECT AREA			
Road Activity	HCP PROJECT AREA ROAD ACTIVITIES (MILES) BY REPORTING PERIOD		
	Jan 2012-Dec 2012	Jan 2013 - Dec 2013	Jan 2014 - Dec 2014
Permanent Road Construction	15.7	25.6	23
Temporary Road Construction	5.3	10.9	9.3
Road Reclamation	4.3	4.6	1.9
Road Abandonment	0	0	1
Road Reconstruction	10.8	11.1	11.3
BMP Maintenance	120.2	111.3	204.6
Total Road Activities	156.3	163.5	251.1

ATTACHMENT G-1

2012 HCP BASELINE DATA - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Recovery Zones (Scattered or Blocked Status)	Linear Miles of Road in Recovery Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	187.6	479.9	12.1	19.6	8.9	679.6	227	145,262	3.0
Kalispell Unit NCDE (Scattered)	14.6	28.2	0.0	2.6	0.0	42.8	10	6,465	4.2
Libby Unit CYE (Scattered)	0.0	8.2	0.1	0.4	0.2	8.3	4	2,848	1.9
Plains Unit CYE (Scattered)	6.0	8.5	0.0	0.1	0.0	14.5	5	3,308	2.8
Stillwater Unit NCDE (Blocked)	122.0	227.4	6.7	9.1	3.8	356.1	141	90,512	2.5
Stillwater Unit NCDE (Scattered)	2.0	11.1	0.0	0.0	0.0	13.1	4	2,474	3.4
Swan Unit NCDE (Blocked)	43.0	196.5	5.4	7.4	4.9	244.9	62	39,656	4.0
SWLO	19.9	23.0	0.0	3.6	1.0	42.9	11	7,229	3.8
Clearwater Unit NCDE (Scattered)	15.7	21.4	0.0	3.6	1.0	37.1	7	4,779	5.0
Missoula Unit NCDE (Scattered)	4.2	1.6	0.0	0.0	0.0	5.8	4	2,450	1.5
CLO	0.2	0.3	0.0	0.0	0.5	0.5	1	639	0.5
Helena Unit NCDE (Scattered)	0.2	0.3	0.0	0.0	0.5	0.5	1	639	0.5

* Does not include Abandoned or Reclaimed Roads

2012 HCP BASELINE DATA - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Non Recovery Occupied Zone (Scattered or Blocked Status)	Linear Miles of Road in Non Recovery Occupied Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	101.2	141.2	3.0	12.3	6.9	245.3	59	37,715	4.2
Kalispell Unit NCDE (Scattered)	17.9	9.0	0.0	0.3	2.1	27.0	9	5,950	2.9
Libby Unit CYE (Scattered)	23.3	49.0	1.2	0.0	0.0	73.4	15	9,856	4.8
Libby Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0.0
Plains Unit CYE (Scattered)	8.7	2.6	1.8	0.0	0.0	13.1	4	2,269	3.7
Plains Unit NCDE (Scattered)	3.7	9.7	0.0	1.2	0.0	13.4	4	2,813	3.0
Stillwater Unit NCDE (Scattered)	47.6	70.9	0.0	10.8	4.9	118.4	26	16,826	4.5
SWLO	66.4	188.2	0.4	39.2	1.0	255.0	64	41,314	4.0
Anaconda Unit NCDE (Scattered)	6.7	14.4	0.0	0.0	0.0	21.2	9	6,011	2.3
Clearwater Unit NCDE (Scattered)	59.6	173.8	0.4	39.2	1.0	233.8	54	34,672	4.3
Missoula Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	1	631	0.0
CLO	10.2	68.2	0.1	7.3	1.9	78.5	53	33,717	1.5
Bozeman Unit GYE (Scattered)	5.0	6.0	0.1	0.0	0.0	11.0	13	8,129	0.9
Dillon Unit GYE (Scattered)	1.5	51.9	0.0	6.7	0.0	53.4	31	19,627	1.7
Helena Unit NCDE (Scattered)	3.8	10.3	0.0	0.6	1.9	14.1	9	5,961	1.5

* Does not include Abandoned or Reclaimed Roads

2012 HCP BASELINE DATA - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices outside Grizzly Bear Zones (Scattered Status)	Linear Miles of Road in Non Grizzly Bear Designated Areas						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	279.7	284.6	2.9	15.8	11.5	567.2	136.0	87,358	4.2
Kalispell Unit	110.4	71.9	0.0	9.8	10.9	182.3	44.0	27,980	4.2
Libby Unit	29.2	75.6	0.3	0.0	0.0	105.1	24.0	15,341	4.4
Plains Unit	140.1	137.1	2.5	6.1	0.7	279.7	69.0	44,036	4.1
SWLO	232.2	378.5	10.1	66.5	9.2	620.9	176.0	112,436	3.5
Anaconda Unit	78.2	63.4	0.0	2.0	0.8	141.6	61.0	38,760	2.3
Clearwater Unit	29.3	31.5	0.0	1.3	0.0	70.1	12.0	7,698	5.8
Hamilton Unit	36.3	98.9	9.8	46.9	6.4	145.0	36.0	22,820	4.1
Missoula Unit	88.4	175.5	0.4	16.3	2.1	264.2	67.0	43,157	3.9
CLO	44.9	142.8	1.9	13.1	1.7	189.6	122.4	78,358	1.5
Bozeman Unit	6.0	21.0	1.6	0.8	0.0	28.5	13.0	8,363	2.2
Dillon Unit	20.1	100.7	0.3	12.2	1.5	121.1	79.0	50,474	1.5
Helena Unit	18.8	21.2	0.0	0.0	0.2	40.0	31.0	19,520	1.3

* Does not include Abandoned or Reclaimed Roads

ATTACHMENT G-1 CONT

2014 HCP Annual Report - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Recovery Zones (Scattered or Blocked Status)	Linear Miles of Road in Recovery Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	193.0	466.6	12.2	18.5	7.0	671.7	226.0	145,241.0	3.0
Kalispell Unit NCDE (Scattered)	14.3	28.4	0.0	2.6	0.0	42.7	10.0	6,458.0	4.3
Libby Unit CYE (Scattered)	0.0	8.1	0.1	0.4	0.2	8.2	4.0	2,846.0	2.0
Plains Unit CYE (Scattered)	6.0	8.5	0.0	0.1	0.0	14.5	5.0	3,319.0	2.9
Stillwater Unit NCDE (Blocked)	129.0	228.4	6.7	7.7	2.8	364.1	141.0	90,481.0	2.6
Stillwater Unit NCDE (Scattered)	2.1	10.0	0.0	0.0	0.0	12.2	4.0	2,481.0	3.0
Swan Unit NCDE (Blocked)	41.6	183.1	5.4	7.7	3.9	230.0	62.0	39,656.0	3.7
SWLO	11.8	18.4	0.0	3.1	1.6	30.2	7.0	5,102.0	4.3
Clearwater Unit NCDE (Scattered)	11.8	18.4	0.0	3.1	1.6	30.2	7.0	4,782.0	4.3
Missoula Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0	
CLO	0.1	0.1	0.0	0.0	0.5	0.2	1.0	639.0	0.2
Helena Unit NCDE (Scattered)	0.1	0.1	0.0	0.0	0.5	0.2	1.0	639.0	0.2

* Does not include Abandoned or Reclaimed Roads

2014 HCP Annual Report - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices in Non Recovery Occupied Zone (Scattered or Blocked Status)	Linear Miles of Road in Non Recovery Occupied Zones						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	104.0	148.7	3.4	12.8	6.9	256.0	58.0	37,734.0	4.4
Kalispell Unit NCDE (Scattered)	18.0	8.7	0.4	0.3	2.1	27.1	9.0	5,979.0	3.0
Libby Unit CYE (Scattered)	23.0	54.3	1.2	0.0	0.0	78.5	15.0	9,838.0	5.2
Libby Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Plains Unit CYE (Scattered)	7.5	8.2	1.8	0.2	0.1	17.5	4.0	2,286.0	4.4
Plains Unit NCDE (Scattered)	3.7	9.7	0.0	1.2	0.0	13.4	4.0	2,792.0	3.3
Stillwater Unit NCDE (Scattered)	51.8	67.8	0.0	11.1	4.7	119.6	26.0	16,839.0	4.6
SWLO	70.3	187.9	0.9	40.1	2.3	259.1	63.0	40,715.0	4.1
Anaconda Unit NCDE (Scattered)	1.7	24.4	0.5	0.9	1.3	26.6	9.0	6,011.0	3.0
Clearwater Unit NCDE (Scattered)	68.6	163.5	0.4	39.2	1.0	232.4	54.0	34,683.0	4.3
Missoula Unit NCDE (Scattered)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	
CLO	17.7	60.0	0.8	7.3	1.9	78.5	53.0	33,679.0	1.5
Bozeman Unit GYE (Scattered)	5.0	5.2	0.8	0.0	0.0	11.0	13.0	8,123.0	0.8
Dillon Unit GYE (Scattered)	5.5	47.9	0.0	6.7	0.0	53.4	31.0	19,626.0	1.7
Helena Unit NCDE (Scattered)	7.2	6.8	0.0	0.6	1.9	14.1	9.0	5,930.0	1.6

* Does not include Abandoned or Reclaimed Roads

2014 HCP Annual Report - DNRC Lands in the HCP Project Area									
Land Offices and Unit Offices outside Grizzly Bear Zones (Scattered Status)	Linear Miles of Road in Non Grizzly Bear Designated Areas						Area		Road Density* (mi/mi ²)
	Open Roads	Restricted Roads	Seasonally Restricted Roads	Abandoned	Reclaimed	Total*	Total Area (mi ²)	Acres	
NWLO	279.9	283.0	3.8	15.9	11.5	566.7	137.0	87,354.0	4.1
Kalispell Unit	110.0	71.4	0.5	9.8	10.9	181.8	44.0	27,976.0	4.1
Libby Unit	31.8	75.6	0.3	0.0	0.0	107.7	25.0	15,692.0	4.3
Plains Unit	138.1	136.0	3.0	6.1	0.7	277.1	68.0	43,686.0	4.1
SWLO	106.4	407.6	14.6	74.5	11.8	609.0	171.0	109,244.0	3.6
Anaconda Unit	35.9	106.2	2.0	12.3	3.4	144.1	60.0	38,232.0	2.4
Clearwater Unit	31.3	31.5	0.0	1.1	0.0	62.8	10.0	6,391.0	6.3
Hamilton Unit	36.8	94.5	9.7	46.4	6.4	141.0	34.0	21,852.0	4.1
Missoula Unit	82.9	175.4	2.9	14.7	2.1	261.2	67.0	42,769.0	3.9
CLO	69.0	110.5	1.9	13.3	1.7	181.4	123.0	78,868.0	1.5
Bozeman Unit	6.0	21.0	1.6	0.8	0.0	28.5	13.0	8,363.0	2.2
Dillon Unit	31.4	89.6	0.3	12.5	1.5	121.2	80.0	50,996.0	1.5
Helena Unit	31.7	0.0	0.0	0.0	0.2	31.7	30.0	19,509.0	1.1

* Does not include Abandoned or Reclaimed Roads

ATTACHMENT L-1

2012 HCP BASELINE DATA - DNRC Lands in the HCP Project Area												
Habitat Class	ACRES AND PERCENTAGE OF LYNX HABITAT BY PROPOSED LMA's (LAND OFFICE)											
	Stillwater West (NWLO)		Stillwater East (NWLO)		Coal Creek (NWLO)		Swan (NWLO)		Seeley Lake Area (SWLO)		Garnet Area (SWLO)	
Winter Foraging Habitat	20,330	57%	24,322	71%	6,410	49%	21,981	60%	1,724	38%	1,079	30%
Summer Foraging Habitat	6,478	18%	2,608	8%	1,934	15%	4,930	14%	265	6%	255	7%
Other Suitable Habitat	4,066	11%	2,627	8%	862	7%	3,441	9%	688	15%	1,847	51%
Suitable Habitat Subtotal	30,874	87%	29,557	86%	9,206	70%	30,352	83%	2,677	59%	3,181	87%
Temporary Non-Suitable Habitat	4,566	13%	4,903	14%	3,962	30%	6,080	17%	1,854	41%	462	13%
Total Potential Lynx Habitat	35,440	92%	34,460	94%	13,168	86%	36,432	92%	4,531	46%	3,643	49%
Non-Habitat	3,167	8%	2,226	6%	2,070	14%	6,224	16%	5,396	54%	3,863	51%
DNRC Total Acres	38,606	100%	36,686	100%	15,238	100%	39,657	100%	9,928	100%	7,507	100%

2014 HCP ANNUAL REPORT - DNRC Lands in the HCP Project Area												
Habitat Class	ACRES AND PERCENTAGE OF LYNX HABITAT BY PROPOSED LMA'S (LAND OFFICE)											
	Stillwater West (NWLO)		Stillwater East (NWLO)		Coal Creek (NWLO)		Swan (NWLO)		Seeley Lake Area (SWLO)		Garnet Area (SWLO)	
Winter Foraging Habitat	18,069	51%	22,408	66%	5,805	44%	19,896	55%	1,791	40%	1,040	29%
Summer Foraging Habitat	8,286	23%	4,544	13%	2,180	17%	4,878	13%	262	6%	211	6%
Other Suitable Habitat	4,196	12%	2,593	8%	1,677	13%	3,600	10%	689	15%	1,809	50%
Suitable Habitat Subtotal	30,551	87%	29,545	87%	9,662	74%	28,374	78%	2,742	62%	3,060	85%
Temporary Non-Suitable Habitat	4,723	13%	4,466	13%	3,402	26%	7,784	22%	1,705	38%	533	15%
Total Potential Lynx Habitat	35,274	91%	34,011	93%	13,064	86%	36,158	91%	4,447	45%	3,593	48%
Non-Habitat	3,299	9%	2,644	7%	2,166	14%	3,498	9%	5,478	55%	3,923	52%
DNRC Total Acres	38,573	100%	36,655	100%	15,230	100%	39,656	100%	9,925	100%	7,516	100%

ATTACHMENT L-2

2012 HCP BASELINE DATA- DNRC Lands in the HCP Project Area							
Habitat Class	NON-LMA ACRES AND PERCENTAGE BY HABITAT CLASS IN THE HCP Project Area (%)						
	NWLO		SWLO		CLO		Total
Winter Foraging Habitat	44,859	69%	11,101	44%	N/A	N/A	55,960
Summer Foraging Habitat	4,580	7%	3,110	12%	3,078	8%	10,768
Other Suitable Habitat	8,515	13%	6,267	25%	22,862	60%	37,644
Suitable Habitat Subtotal	57,954	89%	20,478	82%	25,940	69%	104,372
Temporary Non-Suitable Habitat	7,519	11%	4,643	18%	11,901	31%	24,063
Total Potential Lynx Habitat	65,473	47%	25,121	18%	37,841	34%	128,435
Non-Habitat	74,694	53%	118,423	82%	74,874	66%	267,991
Total Acres	140,167	100%	143,544	100%	112,714	100%	396,425
Total HCP Lands	143,018		144,469		113,182		400,669

2014 HCP ANNUAL REPORT- DNRC Lands in the HCP Project Area							
Habitat Class	EXISTING NON-LMA ACRES AND PERCENTAGE BY HABITAT CLASS IN THE HCP Project Area (%)						
	NWLO		SWLO		CLO		Total
Winter Foraging Habitat	41,042	63%	10,822	44%	N/A	N/A	51,864
Summer Foraging Habitat	5,185	8%	2,371	10%	3,080	8%	10,636
Other Suitable Habitat	10,530	16%	6,577	27%	24,105	59%	41,212
Suitable Habitat Subtotal	56,757	87%	19,770	80%	27,185	67%	103,712
Temporary Non-Suitable Habitat	8,550	13%	5,006	20%	13,577	33%	27,133
Total Potential Lynx Habitat	65,307	47%	24,776	18%	40,762	36%	130,845
Non-Habitat	74,919	53%	113,013	82%	72,423	64%	260,355
Total Acres	140,226	100%	137,789	100%	113,185	100%	391,200
Total, 2012 Baseline Data	140,167		143,544		112,714		396,425